



**Los Angeles County  
Certified Unified Program Agency  
Health Hazardous Materials Division**



# **MANAGEMENT OF CATHODIC RAY TUBES (CRTs)**

**FACT SHEET 02-09-HW**

**OCTOBER 2002**

This fact sheet summarizes the regulatory requirements for the management of Cathodic Ray Tubes (CRTs). The Department of Toxic Substances Control (DTSC) determined in 2001 that CRTs and products containing CRTs are hazardous wastes when discarded. However, to promote the proper management of CRTs, the DTSC adopted emergency regulations allowing CRTs to be managed as universal waste.

## **SUMMARY**

CRTs are vacuum or picture tubes that are used to convert an electronic signal into a visual image. CRTs are contained in computer monitors, televisions, some camcorders and many other electronic devices. A typical CRT contains between two and five pounds of lead. Lead is a toxic substance, which may cause lead poisoning and can be harmful, especially to children. Following DTSC's determination that CRTs are hazardous waste when discarded, the California Integrated Waste Management Board notified local enforcement agencies that CRTs could not be disposed to the trash or the municipal landfills. In response to the resulting concerns on CRT management posed by industry, the DTSC adopted emergency regulations allowing CRTs to be managed as universal waste.

## **CRTs ARE UNIVERSAL WASTE**

CRTs can now be managed as universal wastes. A universal waste is a hazardous waste that is regulated under a section of the State's hazardous waste regulations that deals with high volume, low-risks wastes such as batteries, fluorescent lamps and CRTs. Universal wastes are not subject to traditional hazardous waste requirements; however, they are subject to management requirements that are commensurate with the risk associated with their handling. Managing CRTs as universal waste significantly eases the associated management requirements while preventing the lead from these products from impacting the environment.

## **MANAGEMENT PRACTICES**

The new CRT regulations affect anyone who generates, handles, collects, transports or recycles CRTs, CRT-containing devices or CRT glass in California. In order to manage CRTs properly as universal waste, all applicable requirements must be followed. Standards for CRT material handlers are set forth in Title 22, Chapter 23, Article 7 of the California Code of Regulations. Unless these requirements are met, CRTs must be managed in accordance with all applicable State hazardous waste requirements.

### **Storage and Spill Cleanup Requirements:**

Computer and television monitors must be handled and stored in a manner that prevents breakage. A CRT material handler shall contain any CRT materials in containers or packages that are structurally sound, adequate to prevent breakage, and compatible with the contents of the container [22 CCR 66273.83]. A handler shall immediately cleanup and place in a container any CRT materials that are broken or shows evidence of breakage, leakage or damage that could cause the release of lead or other hazardous constituents to the environment [22 CCR 66273.87]. Broken CRTs may be managed as universal waste as long as they are shipped to an appropriate recycler.

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## Labeling Requirements:

Each CRT, CRT device, container or pallet containing CRT devices or glass shall be labeled or marked clearly as "CRTs", "CRT Devices", "CRT Glass" or "Contains Leaded Glass" [22 CCR 66273.84].

## Accumulation Time Requirements:

CRT wastes can be accumulated and stored on site for up to one year from the date generated or received from another handler. A CRT materials handler who accumulates CRT material must be able to demonstrate the length of time that the universal waste has been accumulated from the date it became a waste or was received. This may be demonstrated by keeping an on-site log or by labeling or marking all pallets, containers or individual CRTs to indicate when the material became a waste or was received on site [22 CCR 66273.85].

## Shipping Requirements:

When shipping CRT materials, the handler shall keep a record of each shipment of CRT material sent from the handler to other facilities [22 CCR 66273.88]. The record may take the form of a log, invoice, manifest, bill of lading or other shipping document. The record for each shipment of CRT material sent shall include the following information:

- The name and address of the CRT material handler, destination facility or foreign destination to whom the CRT material was sent;
- The quantity (count or weight) of each type of CRT material sent; and
- The date the shipment of CRT material left the facility.

When receiving CRT materials, the handler shall keep a record of each shipment of CRT materials received at the facility [22 CCR 66273.89]. The record may take the form of a log, invoice, manifest, bill of lading or other shipping document. The record for each shipment of CRT material received shall include the following information:

- The name and address of the originating handler or foreign shipper;
- The quantity (count or weight) of each type of CRT material received; and
- The date of receipt of the shipment

## Employee Training Requirements:

A CRT material handler shall inform all employees who handle or have responsibility for managing CRT material of the proper handling and emergency procedures appropriate for the waste handled at the facility [22 CCR 66273.86]. A log of employee training regarding CRT management should be kept on site.

## Record Keeping and Notification Requirements:

The CRT material handler shall retain the records related to CRT management for at least three years. Such records include: inventory of waste generated, shipping and receiving logs/papers, employee training logs and so on. In addition to record keeping, the CRT material handler must submit an annual notification to the DTSC and the County of Los Angeles CUPA by November 1<sup>st</sup> of each year [22 CCR 66273.82] if the handler in a calendar year:

- Accepts more than five CRTs;
- Accepts more than five CRT devices;
- Accepts more than 100 kilograms of CRT glass; or
- Generates 5,000 kilograms or more of CRT material

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**NOTE:** This fact sheet is a summary of the laws and regulations pertaining to this subject. It is intended for informational purposes only and may not encompass all the laws and regulations to this topic. More details may be found at Cal/EPA Department of Toxic Substance Control (DTSC) [www.dtsc.ca.gov](http://www.dtsc.ca.gov). If further information is needed, call the County of Los Angeles CUPA at (323) 890-4045, or your local district office.

## References

- 22 California Code of Regulations 66273.80-90.